CHAPTER 5

FOREIGN AMMUNITION

Section Index

Section I. NATO AMMUNITION

Section Index

5-1 GENERAL

a. Agreements between the United States and NATO allies have established the inter-operability of weapon systems and ammunition of the nations. The agreements enable the safe and effective firing of major types of ammunition of the same size from the same compatible size and type of the NATO armies.

b. The following pages cover only authorized German (GE), United Kingdom (UK), Canadian (CA), Netherlands (NL), French (FR), Norwegian (NO), Italian (IT), Danish (DA), Greek (GR) or Belgian (BE) 155-mm components. If a munitions item has not yet been authorized, it is because either it has not yet been determined to be safe to fire, or it has been determined that the munitions item cannot be safely fired from the US weapons system.

WARNING

ONLY UNDER EMERGENCY COMBAT CONDITIONS ZONE 1 OF THE M3A1 AND DM62 PROPELLING CHARGE BE FIRED FROM THE M776 CANNON TUBE OF THE M777 HOWITZER.

DO NOT MIX US, GE, UK, CA, NL, FR, NO, IT, DA, GR, OR BE COMPONENTS (I.E., PROJECTILE, PROPELLING CHARGE, FLASH REDUCER, FUZE). FIRE ONLY ALL COMPONENTS FROM ONE NATION, EXCEPT US, GE, UK, CA, NL, NO, IT, DA, GR, OR BE 155-MM MUNITIONS.

NOTE

At the conclusion of any training exercise, ammunition drawn from a NATO nation and not fired should be returned to the troops of the NATO nation from whom it was obtained.

5-2 AUTHORIZED PROJECTILES

a. The following GE munitions are authorized for use in howitzer:

Projectile ..... 155-mm, HE, DM21 (TNT loaded only)
Charge, propelling..... Green bag, DM62, zones 1-5
Charge propelling..... White bag, DM42B1, zones 3-7
Fuze ..... Point-detonating, DM211
Primer..... Use only US M82, do not use GE DM191A1 primer

b. The following UK munitions are authorized for use in howitzer:

Projectile ..... 155-mm, HE, M107 (TNT loaded only)
Charge, propelling..... Green bag, M3A1, zones 1-5
Charge propelling..... White bag, M4A2, zones 3-7
Fuze ..... Point-detonating, M557, L85A2
Primer..... M82

c. The following CA munitions are authorized for use in howitzer:

Projectile ..... 155-mm, HE, M107
Charge, propelling..... M3[1], M3A1, M4A1[1], M4A2
Fuze ..... Point-detonating, M557, M564
Proximity, M514A1
Primer..... M82

d. The following NL munitions are authorized for use in howitzer:

Projectile ..... 155-mm, HE, M107, M107C1[2], (TNT-loaded only)
Charge, propelling ..... M3C1[2], M4C3[2], M4A1[1]
Fuze ..... Point-detonating, M557, M557C1[2]
Primer ..... M82, M82C1[2]

e. The following FR munitions are authorized for use in howitzer:

Projectile ..... 155-mm, HE, M107
Charge, propelling..... Green bag, M3[1], zones 1-5
Charge, propelling..... White bag, M4A1[1], zones 5-7
Fuze ..... Point-detonating, M557
Primer..... Use US M82 only, not MK2A4

NOTE

FR troops must use MK2A4 primer in FR F3 AMSP weapon.

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[1] *These charges do not have flash reducers.*
[2] *NL Manufacture.*

f. The following NO munitions are authorized for use in howitzer:

WARNING

DO NOT FIRE M107 PROJECTILES WHEN LOT NUMBER START WITH RA.

INTERCHANGE FIRINGS WILL BE WITH TNT-LOADED M107 PROJECTILES ONLY

Projectile ..... 155-mm, HE, M107 (TNT-loaded only)
Charge, propelling..... Green bag, M3A1, zones 1-5
Charge, propelling..... White bag, NM23 (same as US M4A2), zones 3-7
Fuze ..... Point-detonating, M557
Primer M82

NOTE

Except as noted above, preparation for firing GE, UK, CA, NL, FR, NO, IT, DA, GR, and BE munitions in US weapons system (preparation for firing, precautions during firing, misfire procedures, etc are contained in Chapters 2 and 4 of this manual.

g. The following IT munitions are authorized for use in howitzer:

Projectile ..... 155-mm, HE, M107 (TNT-loaded only)
Charge, propelling..... Green bag, M3A1, zones 1-5
Charge, propelling..... White bag, M4A2, zones 3-7
Fuze ..... Point-detonating, M557, MTSQ, M564
Primer M82

h. The following DA munitions are authorized for use in howitzer:

Projectile ..... 155-mm, HE, M107 (TNT-loaded only)
Charge, propelling..... Green bag, M3[1], M3A1 zones 1-5
Charge, propelling..... White bag, M4A1[1,] M4A2, zones 3-7
Fuze ..... Point-detonating, M557C1, MTSQ, M564
Primer M82

i. The following GR munitions are authorized for use in howitzer:

Projectile ..... 155-mm, HE, M107, M107B2 (TNT-loaded only)
Charge, propelling..... Green bag, M3[1], M3A1 zones 1-5
Charge, propelling..... White bag, M4A1[1,] M4A2, zones 3-7
Fuze ..... Point-detonating, M557, MTSQ, M564
Prime..... M82

[1] *These charges do not have flash reducers.*

5-2 AUTHORIZED PROJECTILES (cont)

j. The following BE munitions are authorized for use in howitzer:

Projectile ..... 155-mm, HE, M107, (TNT-loaded only)
Charge, propelling..... Green bag, M3A1 zones 1-5
Charge, propelling..... White bag, M4A2, zones 3-7
Fuze ..... Point-detonating, M557, MTSQ, M564
Primer..... M82

k. The following US munitions are authorized for use in GE M109, UK M109, NL M109, FR F3 AM, and NO M109G CA M109 and M114 series weapon systems:

NOTE

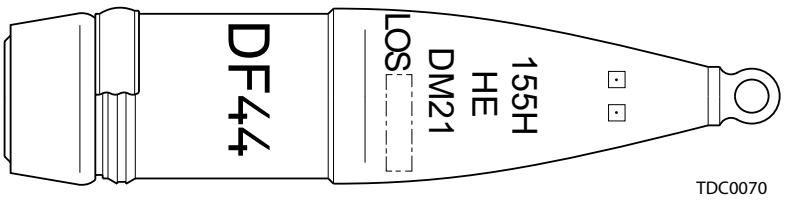
During training exercises, give either TNT or Comp B-loaded 155-mm, HE, M107 projectiles to UK, NL, and FR troops.

Projectile ..... 155-mm, HE, M107
Charge, propelling..... Green bag, M3A1 zones 1-5
Charge, propelling..... White bag, M4A2, zones 3-7
Primer..... M82 (GE use DM191A1; FR F3 AM use MK244)

l. The authorized projectiles and their characteristics are as follows:

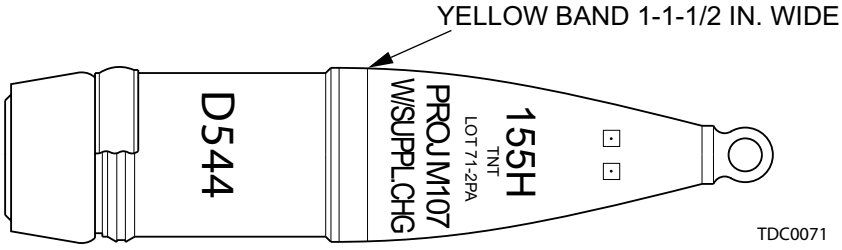
(1) Projectile, 155-mm, HE, DM21 (GE). This HE projectile is used for blast effect, fragmentation and mining. The projectile is a hollow steel shell filled with TNT. PD fuze is used with this projectile. A supplementary charge of 0.3 lb (0.136 kg) TNT is sealed in an aluminum container placed in the fuze cavity of the projectile. The projectile weighs approximately 92.0 lb 41.7 kg).

DM21 PROJECTILE



(2) Projectile, 155-mm, HE, M107 (Normal and Deep Cavity) (UK, CA, and NL). This HE projectile is used for blast effect, fragmentation, and mining. The projectile is a hollow steel shell filled with TNT. PD fuze is used with this projectile. A supplementary charge of 0.3 lb (0.136 kg) TNT is sealed in an aluminum container placed in the fuze cavity of this projectile. The projectile weighs approximately 92.3 lbs (41.9 kg).

M107 PROJECTILE

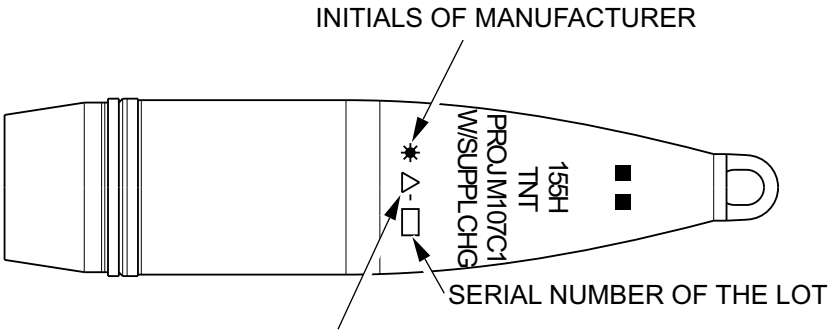


NOTE

With the exception of a yellow hazard band around the body of renovated projectiles, these UK munitions are identical to US munitions.

(3) Projectile, 155-mm, HE, M107C1 (NL). This HE projectile is used for blast effect, fragmentation, and mining. The projectile is a hollow steel shell filled with TNT. PD, time, or VT (deep cavity only) fuzes may be used. The projectile weighs approximately 92.3 lb (41.9 kg).

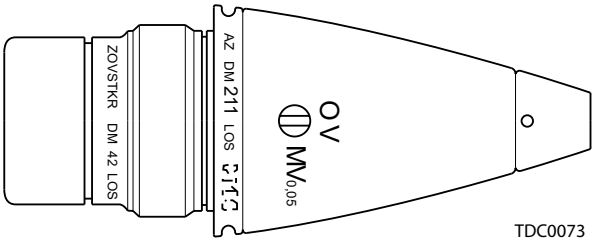
M107C1 PROJECTILE



5-3 AUTHORIZED FUZES

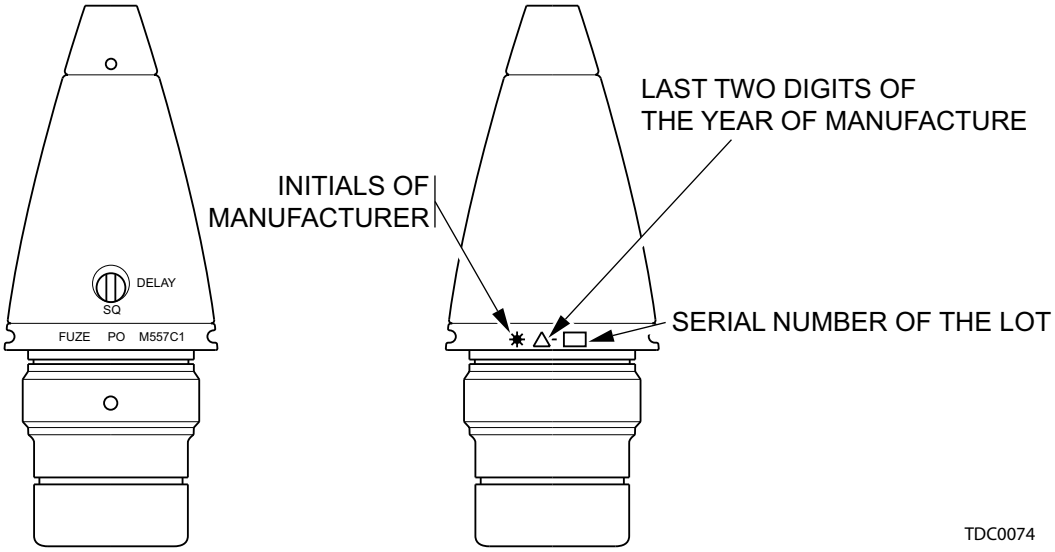
a. Fuze, PD, DM211 (GE and NO). The DM211 fuze has a SQ element in the head consisting of a firing pin, firing pin support, and detonator. The fuze body contains a DLY plunger assembly and a selective device for SQ or DLY action. The DM211 fuze is similar to the US fuze M557.

DM211 FUZE



5-3 AUTHORIZED FUZES (cont)

M557C1 FUZE

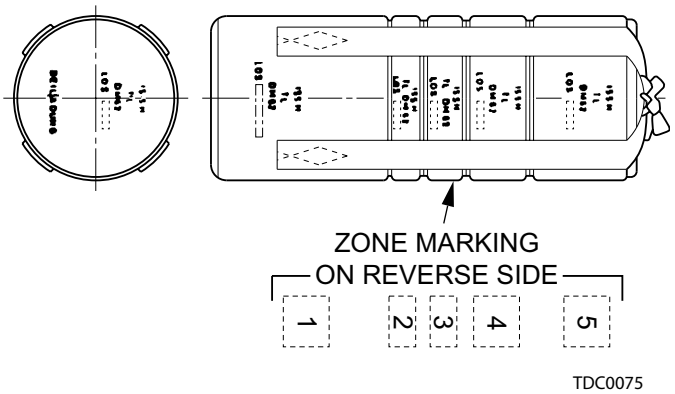


b. Fuze, PD, M557C1 (NL). The M557C1 fuze is a selective SQ or 0.05-second DLY impact fuze. The M557C1 fuze is a US M557 fuze with a booster M125C1 of IT manufacture. This booster is the same design as the US M125A1 except that it is fitted with a setback pin, which locks one of the spin locks.

5-4 AUTHORIZED PROPELLING CHARGES

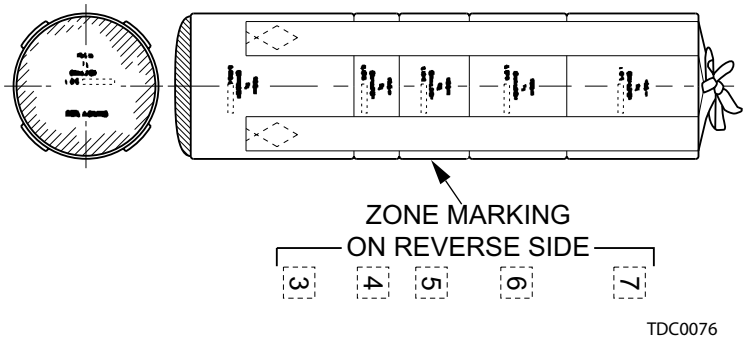
a. Propelling Charge, DM62 (GE). This is a green bag charge consisting of a base charge and four unequal increments loaded in cloth bags for firing in zones 1 thru 5. The bags are fastened together with four cloth straps sewn to the base and tied on top of increment no. 5. The clean burning igniter in a red or brown cloth bag is sewn to the rear of the base charge.

DM62 PROPELLING CHARGE



b. Propelling Charge, DM42B1 (GE). This is a white bag charge consisting of a base charge and four unequal increments loaded in cloth bags for firing in zones 3 thru 7. The increments are connected by four cloth tapes sewn to the base and tied on top of increment no.7. The clean burning igniter in a red or brown cloth bag is sewn to the bottom of the base charge. A flash reducer pad is assembled at the front end of the base charge.

DM42B1 PROPELLING CHARGE

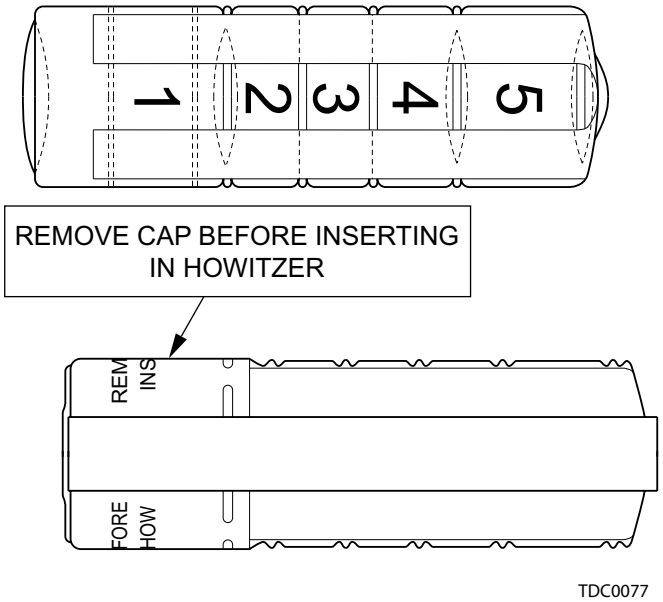


NOTE

Lot number of assembled propellant charge is shown on the base charge and all supplemental charges.

c. Propelling Charge, M3C1 (NL). This is a green bag charge consisting of a base charge and four unequal increments loaded in cloth bags for firing in zones 1 thru 5. The bags are fastened together with four cloth straps sewn to the base and tied on top of increment no. 5. It has a flash reducer pad in front of the base charge and two flash reducer pads in front of increments no. 4 and 5. The clean burning igniter in a red cloth bag is sewn to the rear of the base charge.

M3C1 PROPELLING CHARGE



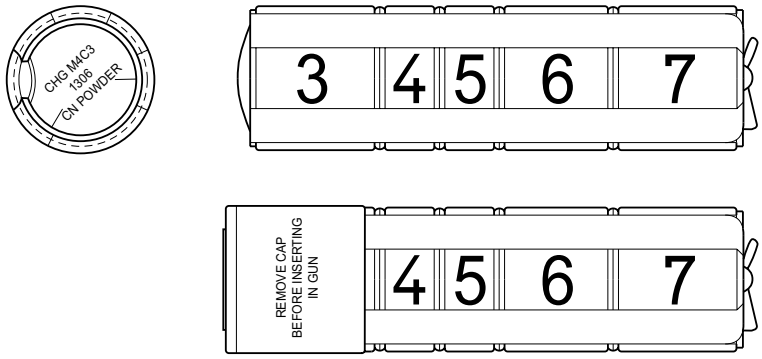
NOTE

Lot number of assembled propellant charge is shown on the base charge and all supplemental charges.

5-4 AUTHORIZED PROPELLING CHARGES (cont)

d. Propelling Charge, M4C3 (NL). This is a white bag charge consisting of a base charge and four unequal increments loaded into cloth bags for firing in zones 3 thru 7. The increments are connected by four cloth tapes sewn to the base and tied on top of increment no. 7. The clean burning igniter in a red cloth bag is sewn to the bottom of the base charge (increment no. 3). A flash reducer pad is assembled at the front of the base charge (increment no.3).

M4C3 PROPELLING CHARGE



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